

Table S6. Net and exchange fluxes during growth on [1,4-¹³C]succinate.

Reaction	Wild type				NifA*			
	net flux	90% CI	xch flux	90% CI	net flux	90% CI	xch flux	90% CI
<i>Uptake</i>	50.0	0.0			50.0	0.0		
<i>CS</i>	7.1	0.8			9.1	0.8		
<i>IDH</i>	7.1	0.8			9.1	0.7		
<i>αKDH</i>	1.3	0.1			2.4	0.2		
<i>αKDH2</i>	1.3	0.1			2.4	0.2		
<i>SDH</i>	51.8	0.2			54.2	0.4		
<i>MDH</i>	51.5	1.5			53.9	1.5		
<i>ILy</i>	0.0	0.1	0.1	0, 0.1	0.0	0.1	0.1	0, 0.1
<i>ILy2</i>	0.0	0.1	0.1	0, 0.1	0.0	0.1	0.1	0, 0.1
<i>MSyn</i>	0.0	0.2			0.0	0.3		
<i>PK</i>	31.4	2.2			31.1	2.1		
<i>PEPCK</i>	38.0	1.7	15	14, 15	39.4	1.6	17	12, 24
<i>PDH_POR</i>	17.6	1.5	4	0, 17	18.9	1.4	3	0, 32
<i>MEnz</i>	0.0	1.4			0.0	1.4		
<i>Eno</i>	3.3	1.6	77	75, 78	5.6	1.5	75	71, 79
<i>GAPDH</i>	71.2	7.7			49.9	6.1		
<i>Ald</i>	0.2	5343			-3.3	7439		
<i>PGI</i>	1.7	2.8			1.7	2.5		
<i>Rubisco</i>	36.7	4.3			24.6	3.5		
<i>S7Ald</i>	27.8	5346			22.8	7441		
<i>OPPP</i>	0.0	2.8			0.2	2.5		
<i>net_CO2</i>	37.7	3.0			56.2	2.9		
<i>TK1</i>	13.8	1.3			9.7	1.3		
<i>TK2</i>	12.3	1.3			8.0	1.3		
<i>TA</i>	15.5	5345			14.7	7440		
<i>vAsp</i>	4.2	0.5			3.6	0.4		
<i>vAspout</i>	1.6	0.2			1.4	0.2		
<i>vThr</i>	1.4	0.2			1.2	0.2		
<i>vThrouT</i>	2.6	0.4			2.2	0.4		
<i>vIleT</i>	0.9	0.2			0.8	0.1		
<i>vIleC</i>	0.9	0.2			0.9	0.1		
<i>vIle3</i>	0.9	0.2			0.9	0.1		
<i>vIle_out</i>	0.1	0.0			0.0	0.0		
<i>vVal</i>	1.6	0.2			1.4	0.2		
<i>vVal2</i>	1.6	0.2			1.4	0.2		
<i>vVal_out</i>	1.4	0.2			1.3	0.2		
<i>vLeu</i>	1.8	0.3			1.6	0.3		
<i>vLeu_out</i>	1.8	0.3			1.6	0.3		
<i>vSer</i>	5.5	0.6			4.8	0.5		
<i>vSer_out</i>	2.4	0.4			2.1	0.3		
<i>vGly</i>	3.1	0.4			2.7	0.4		

<i>vGly_out</i>	2.8	0.4	2.4	0.4
<i>vMet</i>	0.1	0.0	0.1	0.0
<i>vMet_out</i>	0.1	0.0	0.1	0.0
<i>vPhe1</i>	1.4	0.2	1.2	0.2
<i>vPhe2</i>	1.4	0.2	1.2	0.2
<i>vPhe_out</i>	1.4	0.2	1.2	0.2
<i>vG6P_out</i>	1.7	0.3	1.4	0.2
<i>vF6P_out</i>	0.1	0.0	0.1	0.0
<i>vpp_out</i>	1.6	0.3	1.4	0.2
<i>vG3P_out</i>	1.1	0.2	1.0	0.2
<i>vPEP_out</i>	0.5	0.1	0.4	0.1
<i>vE4P_out</i>	0.1	0.0	0.4	0.1
<i>vPyr_out</i>	5.2	0.8	4.4	0.7
<i>vAc_out</i>	7.9	1.5	7.4	1.3
<i>vOAA_out</i>	2.2	0.4	1.9	0.3
<i>vaKG_out</i>	4.6	0.8	4.2	0.7
<i>vS7P_out</i>	0.1	0.0	0.1	0.0
<i>v_AL</i>	0.4	0.0	0.3	0.0
<i>v_BChl</i>	0.3	0.0	0.3	0.0
<i>v_Pent</i>	0.4	0.1	0.3	0.1
<i>vAL_out</i>	0.1	0.0	0.1	0.0
<i>vBC_out</i>	0.3	0.0	0.3	0.0
<i>vPent_out</i>	0.4	0.1	0.3	0.1
<i>vCI_out</i>	3.0	0.4	2.6	0.4
<i>Fum_out</i>	0.3	0.0	0.2	0.1

Exchange fluxes (xch fluxes; ranging from zero to infinity) that could be determined are shown with non-symmetrical 90% confidence intervals.